



Appendix F Threatened and Endangered Species

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This appendix discusses the federal and state threatened and endangered species, candidate species, and plant species of concern potentially found on the Hanford Site. Threatened and endangered species are listed by the federal government in Title 50, Code of Federal Regulations, Part 17 (50 CFR 17); Washington Natural Heritage Program (1997); and Washington State Department of Fish and Wildlife (1996).

The purposes of the Endangered Species Act of 1973, as amended, are to 1) provide a means to conserve critical ecosystems, 2) provide a program for the conservation of threatened and endangered species, and 3) ensure that appropriate steps are taken to achieve the purposes of the treaties and conventions established in the Act. Threatened and endangered species of plants and animals occurring or potentially occurring on the Hanford Site are listed in Table F.1.

Identification of candidate species can assist environmental planning efforts by providing advance notice of potential listing as a threatened or endangered species, allowing resource managers to alleviate threats and thereby possibly remove the need to list species as endangered or threatened. Even if a candidate species is subsequently listed, the early notice could result in fewer restrictions on human activities in the environment by prompting candidate conservation measures to alleviate threats to the species. Washington State candidate animal species potentially found on the Hanford Site are listed in Table F.2. Plant species not listed as threatened or endangered but considered “candidates” for listing are identified by Washington State as “species of concern;” those potentially found on the Hanford Site are listed in Table F.3.

Hanford Status

No plants or mammals on the federal list of endangered and threatened species (50 CFR 17) are known to occur on the Hanford Site. There are, however, three species of birds and two fish on the federal list of threatened and endangered species (see Table F.1). In addition, nine species of plants, seven species of birds, and one mammalian species have been listed as either threatened or endangered by Washington State. The National Marine Fisheries Service has the responsibility for the federal listing of anadromous fish (i.e., those which require both saltwater and freshwater to complete a life cycle).

Upper-Columbia River steelhead and upper-Columbia River spring-run chinook salmon were listed as endangered in August 1998 and March 1999, respectively.

Several species of both plants and animals are under consideration for formal listing as candidate species by Washington State. There are 19 state-level candidate species of plants and animals (see Table F.2) and 42 plant species of concern (see Table F.3).



Table F.1. Federal- or Washington State-Listed Threatened (T) and Endangered (E) Species Occurring or Potentially Occurring on the Hanford Site

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal</u>	<u>State</u>
Plants			
Columbia milkvetch	<i>Astragalus columbianus</i>		T
Columbia yellowcress	<i>Rorippa columbiae</i>		T
Dwarf evening primrose	<i>Camissonia</i> (= <i>Oenothera</i>) <i>pygmaea</i>		T
Hoover's desert parsley	<i>Lomatium tuberosum</i>		T
Loeflingia	<i>Loeflingia squarrosa</i> var. <i>squarrosa</i>		T
Northern wormwood ^(a)	<i>Artemisia campestris</i> <i>borealis</i> var. <i>wormskioldii</i>		E
Umtanum desert buckwheat	<i>Eriogonum codium</i>		E
White Bluffs bladderpod	<i>Lesquerella tuplashensis</i>		E
White eatonella	<i>Eatonella nivea</i>		T
Fish			
Spring-run chinook	<i>Oncorhynchus tshawytscha</i>	E	
Steelhead	<i>Oncorhynchus mykiss</i>	E	
Birds			
Aleutian Canada goose ^(b)	<i>Branta canadensis leucopareia</i>	T	T
American white pelican	<i>Pelecanus erythrorhychos</i>		E
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	T
Ferruginous hawk	<i>Buteo regalis</i>		T
Peregrine falcon ^(b)	<i>Falco peregrinus</i>	E	E
Sandhill crane	<i>Grus canadensis</i>		E
Western sage grouse ^(a)	<i>Centrocercus urophasianus phaios</i>		T
Mammals			
Pygmy rabbit ^(a)	<i>Brachylagus idahoensis</i>		E

(a) Potentially occurring.

(b) Incidental occurrence.



Table F.2. Washington State Candidate Animal Species Potentially Found on the Hanford Site

<u>Common Name</u>	<u>Scientific Name</u>
Molluscs	
Columbia pebble snail	<i>Fluminicola</i> (= <i>Lithoglyphus</i>) <i>columbiana</i>
Shortfaced lanx	<i>Fisherola</i> (= <i>Lanx</i>) <i>nuttalli</i>
Insects	
Columbia River tiger beetle ^(a)	<i>Cicindela columbica</i>
Juniper hairstreak	<i>Mitoura siva</i>
Silver-bordered bog fritillary	<i>Boloria selene atrocastalis</i>
Birds	
Burrowing owl	<i>Athene cunicularia</i>
Common loon	<i>Gavia immer</i>
Flammulated owl ^(b)	<i>Otus flammeolus</i>
Golden eagle	<i>Aquila chrysaetos</i>
Lewis' woodpecker ^(b)	<i>Melanerpes lewis</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Merlin	<i>Falco columbarius</i>
Northern goshawk ^(b)	<i>Accipter gentilis</i>
Sage sparrow	<i>Amphispiza belli</i>
Sage thrasher	<i>Oreoscoptes montanus</i>
Reptiles	
Striped whipsnake ^(b)	<i>Masticophis taeniatus</i>
Mammals	
Merriam's shrew	<i>Sorex merriami</i>
Townsend's big-eared bat ^(a)	<i>Coryhorhinus townsendii</i> ^(c)
Washington ground squirrel ^(b)	<i>Spermophilus washingtoni</i>

(a) Probable, but not observed, on the Hanford Site.

(b) Reported, but seldom observed, on the Hanford Site.

(c) Formally known as *Plecotus townsendii*.



Table F.3. Washington State Plant Species of Concern Occurring on the Hanford Site

Common Name	Scientific Name	State Listing^(a)
Annual paintbrush	<i>Castilleja exilis</i>	R1
Awed half chaff sedge	<i>Lipocarpus</i> (= <i>Hemicarpus</i>) <i>aristulata</i>	R1
Basalt milk-vetch	<i>Astragalus conjunctus</i> var. <i>rickardii</i>	R1
Bristly combseed	<i>Pectocarya setosa</i>	W
Brittle prickly-pear	<i>Opuntia fragilis</i>	R1
Canadian St. John's wort	<i>Hypericum majus</i>	S
Chaffweed	<i>Centunculus minimus</i>	R1
Columbia River mugwort	<i>Artemisia lindleyana</i>	W
Crouching milkvetch	<i>Astragalus succumbens</i>	W
Desert dodder	<i>Cuscuta denticulata</i>	S
Desert evening-primrose	<i>Oenothera cespitosa</i>	S
False pimpernel	<i>Lindernia dubia anagallidea</i>	R2
Fuzzytongue penstemon	<i>Penstemon eriantherus whitedii</i>	R1
Geyer's milkvetch	<i>Astragalus geyeri</i>	S
Grand redstem	<i>Ammannia robusta</i>	R1
Gray cryptantha	<i>Cryptantha leucophaea</i>	S
Great Basin gilia	<i>Gilia leptomeria</i>	R1
Hedge hog cactus	<i>Pediocactus simpsonii</i> var. <i>robustus nigripinus</i>	R1
Kittitas larkspur	<i>Delphinium multiplex</i>	W
Miner's candle	<i>Cryptantha scoparia</i>	R1
Palouse thistle	<i>Cirsium brevifolium</i>	W
Piper's daisy	<i>Erigeron piperianus</i>	S
Robinson's onion	<i>Allium robinsonii</i>	W
Rosy balsamroot	<i>Balsamorhiza rosea</i>	W
Rosy pussypaws	<i>Calyptidium roseum</i>	S
Scilla onion	<i>Allium scilloides</i>	W
Shining flatsedge	<i>Cyperus bipartitus (rivularis)</i>	S
Small-flowered evening-primrose	<i>Camissonia</i> (= <i>Oenothera</i>) <i>minor</i>	R1
Small-flowered nama	<i>Nama densum</i> var. <i>parviflorum</i>	R1
Smooth cliffbrake	<i>Pellaea glabella simplex</i>	W
Snake River cryptantha	<i>Cryptantha spiculifera</i> (= <i>C. interrupta</i>)	S
Southern mudwort	<i>Limnophila acaulis</i>	W
Stalked-pod milkvetch	<i>Astragalus sclerocarpus</i>	W
Suksdorf's monkey flower	<i>Mimulus suksdorfii</i>	S
Toothcup	<i>Rotala ramosior</i>	R1
Winged combseed	<i>Pectocarya linearis</i>	R1

The following species have been reported as occurring on the Hanford Site, but the known collections are questionable in terms of location or identification, and have not been recently collected on the Hanford Site.

Coyote tobacco	<i>Nicotiana attenuata</i>	S
Dense sedge	<i>Carex densa</i>	S
Few-flowered collinsia	<i>Collinsia sparsiflora</i> var. <i>bruciae</i>	S
Medic milkvetch	<i>Astragalus speirocarpus</i>	W
Palouse milkvetch	<i>Astragalus arrectus</i>	S
Thompson's sandwort	<i>Arenaria franklinii thompsonii</i>	R2

- (a) S = Sensitive (i.e., taxa vulnerable or declining) and could become endangered or threatened without active management or removal of threats.
 R1 = Taxa for which there are insufficient data to support listing as threatened, endangered, or sensitive (formerly monitor group 1).
 R2 = Taxa with unresolved taxonomic questions (formerly monitor group 2).
 W = Taxa that are more abundant and/or less threatened than previously assumed (formerly monitor group 3).



References

50 CFR 17. U.S. Fish and Wildlife Service, Department of the Interior. "Endangered and Threatened Wildlife and Plants." *Code of Federal Regulations*.

Endangered Species Act. 1973. Public Laws 93-205 through 100-707.

Washington Natural Heritage Program. 1997. *Rare Plant Species County List*. Washington State Department of Natural Resources, Olympia, Washington. Available URL: <http://www.wa.gov/dnr/htdocs/fr/nhp/plantco.html>

Washington State Department of Fish and Wildlife. 1996. *Priority Habitats and Species List*. Olympia, Washington. Available URL: <http://www.wa.gov/wdfw/hab/phspage.htm>